AMENDMENTS TO THE DRAWINGS

The attached sheet of drawing includes changes to the drawing sheet for Figure 1. Applicant added the reference number 12 which is found in the specification. No new matter has been added.

Attachment: Replacement sheet

REMARKS

Claims 1 through 12 stand rejected. Applicant has amended independent Claims 1 and 10. Thus, Claims 1-12 are pending in the application and are presented for examination in view of the amendments and the following remarks. Applicant is further submitting a Replacement Sheet for Figure 1.

Corrections to Figure 1

A careful review of the specification and figures identified an inconsistency between the figures and specification. Applicant has submitted a Replacement Sheet for Figure 1. Applicant added the reference number 12 to Figure 1 which is found in the specification. No new matter is added by the amendment. Applicant respectfully requests the entry of the amendment.

Claim Objection

Claim 6 was objected to because the claim referred back to Claim 1. Applicant has accordingly amended Claim 6 to depend from Claim 3, and respectfully submits that the objection to the Claim 6 has been overcome.

Rejection under 35 U.S.C. § 103(a) based upon MacFarlane (U.S. Patent No. 6,672,157)

The Examiner rejected independent Claim 1 as being unpatentable over U.S. Patent No. 6,672,157 to MacFarlane. Amended Claim 1 recites, *inter alia*, "increasing the resistance level of the resistance element", "repeating the acts of moving, measuring and increasing until sufficient data are collected", and "determining a maximum power for the muscle group." At least these elements are not disclosed in MacFarlane.

MacFarlane discloses a portable power tester which claims to be used with any weight lifting equipment or isokinetic testing equipment (see Figures 1-3) to determine muscular power. The power tester consists of an input structure, a hand held controller, and output devices. (See col. 9, lines 63-65 and Figure 4). To operate the power tester, a user enters the mass of the resistance element and distance between pairs of position sensors. The user then accelerates the mass so that the mass breaks the plane of the two pairs of sensors. When both sensors are triggered, the controller determines the time between sensor triggers and the mean power of movement calculated from the speed of movement and the entered mass for the repetition. While

MacFarlane measures power, it does not measure power over increasing resistance levels. Rather, MacFarlane measures power at a particular resistance level. Nowhere does MacFarlane describe testing a muscle group of a single subject to determine a maximum power for that subject's muscle group over multiple resistance levels.

As explained in Applicant's specification, the described method can be advantageously used to determine the resistance level and velocity where a person has the greatest power. From the graphs in Applicant's Figure 11, it can be seen that the power reaches a maximum magnitude for different forces and velocities for the user's left arm and the user's right arm for the illustrated measurement sequence. For example, the graphs 1110 and 1120 indicate that at each resistance level, the left arm generally has a greater velocity than the velocity of the right arm. Thus, the left arm generally has more power at most resistance levels, as indicated by the graphs 1130 and 1140. Assuming that the information in the graphs of Figure 11 remains consistent over multiple measurements (e.g., that the particular user consistently moves the handgrips at the highest velocities for each increment of resistance level), an athletic trainer or a therapist may use the information in the graphs as a basis for determining that the particular user should focus on training at heavier weights. A conditioning program can also be developed to improve the symmetry of the user by tailoring the program based on the power differences between the left and right arms.

The described method can also be used to tailor exercises so that the maximum power is achieved at levels ideally suited for a particular activity. For example, certain athletic activities, such as competitive weight lifting, require maximum power at high levels of force while maintaining a moderate velocity at those levels. On the other hand, other athletic activities, such as for example, throwing baseballs, require maximum power at much higher velocities without requiring high levels of force. In between, activities, such as putting the shot, require maximum power at higher levels of force than throwing baseballs while maintaining a relatively high velocity.

The described method can also be used to gather data to develop graphs of the power of successful athletes and persons in other professions requiring physical ability to determine the resistance levels where such athletes and other persons produce the most power. This information can be advantageously used to evaluate aspiring athletes and other persons to determine how they compare to the anticipated power requirements for their activities. Armed

with the information thus obtained, the person can develop a training program to properly condition the muscles to obtain the desired results.

MacFarlane does describe correlation testing using the power tester in combination with an isokinetic machine and an isotonic machine. As explained in MacFarlane, the correlation testing between the "maximum measured power" tester power for the different machines showed the power tester is a valid measure of power assessment during knee extension. (See col. 10, lines 39-62). However, these maximum power values were derived from testing of a sample population of at least eighteen different subjects for the purpose of correlating the power tester with multiple machines. (See col. 10, lines 43-49). The correlation testing in MacFarlane did not determine a person's greatest power over increasing resistance levels for a muscle group or where the person has the greatest power.

Rejection under 35 U.S.C. § 103(a) over Stima, II (U.S. Patent No. 4,846,466) in view of Brock (U.S. Patent No. 6,231,481))

The Examiner rejected independent Claim 10 as being unpatentable over U.S. Patent No. 4,846,466 to Stima, III in view of U.S. Patent No. 6,231,481 to Brock. Amended Claim 10 recites, *inter alia*, a power calculation system that determines "a maximum power over the sequence of increasing resistance levels for the muscle group" and "a velocity and a resistance level where the maximum power is produced." At least these elements are not disclosed in the applied prior art.

As with MacFarlane, Stima, III and Brock do not recite structure that determines the maximum power of a muscle group of a person as recited in Claim 10. As recognized in the office action, Stima, III does not disclose the position transducer and the power calculation system recited in Claim 10. The office action relies upon Brock for disclosing both of these elements. However, like MacFarlane, Brock does not recite structure that evaluates the power over a sequence of increasing resistance levels for a muscle group as recited in amended Claim 10. The system in Brock simply measures power for each repetition performed by a user and displays the peak power for the completed repetitions (see Figures 1, 8, and col. 4, lines 54-63). The peak power is not over a sequence of increasing resistance levels for a muscle group.

Stima, III and Brock do not teach or suggest Applicant's claimed structure or how such structure solves shortcomings in the prior art that were previously unappreciated and/or

unaddressed. For example, Stima, III and Brock do not recognize the need to determine a maximum power for a muscle group over a sequence of increasing resistance levels or the benefit of tailoring exercises so that the maximum power is achieved at levels ideally suited for a particular activity.

The applied art also does not recognize the benefit of developing a conditioning program that utilizes the determined maximum power. For example, by starting where the person has the most power, the conditioning program can start at a force and velocity where the person is most likely to be able to complete an exercise routine such that the person will also develop the confidence required to continue with the conditioning program. Accordingly, the applied references fail to disclose, *inter alia*, the above-noted elements recited by amended Claim 10.

Claims 2-9 and 11-12 depend directly or indirectly from one of Claims 1 and 10 and, thus, are patentable for at least the same reasons that the claims from which they depend are patentable over the applied art. Therefore, allowance of Claims 1-12 is respectfully requested.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Any remarks in support of patentability of one claim should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on solely that portion; rather, patentability must rest on each claim taken as a whole. Applicants have not presented arguments concerning whether the applied references can be properly combined in view of the clearly missing elements noted above, and Applicants reserve the right to later contest whether a proper motivation and suggestion exists to combine these references.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicants' attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 6/30/06

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